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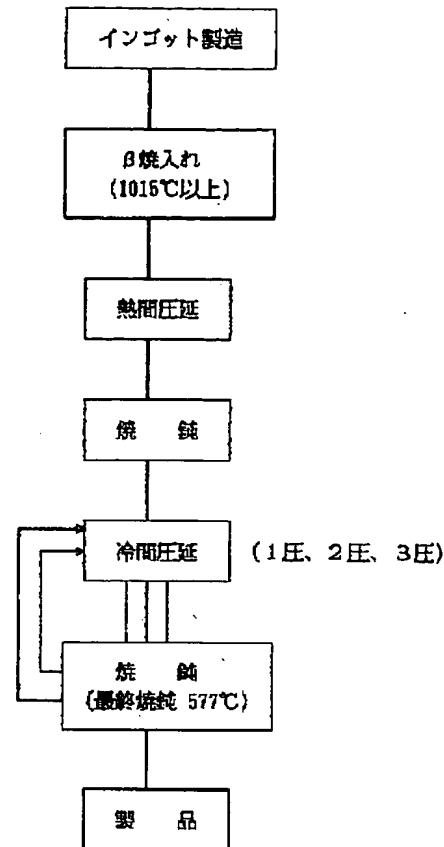
APPLICATION DATE : 17-01-97
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APPLICANT : NUCLEAR FUEL IND LTD;

INVENTOR : ITO YOICHI;

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TITLE : MANUFACTURE OF INNER
 STRUCTURE MATERIAL OF CORE OF
 NUCLEAR REACTOR OR ZIRCONIUM
 ALLOY TYPE EXCELLENT IN
 CORROSION RESISTANCE,
 ESPECIALLY IN EVEN CORROSION
 RESISTANCE AND HYDROGEN
 ABSORPTION RESISTANCE



ABSTRACT : PROBLEM TO BE SOLVED: To assure a sufficient corrosion resistance over a long term use and a high combustion degree.

SOLUTION: Zirconium prepared so that it may contain Sn: 0.8-1.2wt.% and O: 1000-1500ppm, or Sn: 1.2-1.7wt.% Fe: 0.17-0.28wt.%, Cr: 0.05-0.15wt.%, Ni: 0.04-0.10wt.%, Nb: 0.01-0.09wt.% and impurities Si of 120ppm or below in concentration, and the rest Zr, is melted and formed into a cast piece, then it is subjected to quenching process, and further rolled and annealed so that the total heat amount to the material ΣA_i may be in the range of 1×10^{-19} to 1×10^{-17} .

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